## Attachment 3 – City of Eureka Capital Improvement Plan Excerpt

## Capital Improvement Program 2021/22

WASTEWATER

## **FIVE YEAR SUMMARY**

		(Thousands of Dollars)								
		<b>Total Project Cost</b>	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5			
Page #	Project Name	2021 Dollars	21/22	22/23	23/24	24/25	25/26			
7-5	Wastewater Collection System Maintenance	\$11,100	\$1,600	\$2,000	\$2,500	\$2,500	\$2,500			
7-6	Wastewater Lift Station Upgrade Program	\$1,597	\$0	\$610	\$468	\$294	\$225			
7-7	Cross Town Interceptor Maintenance Phase II	\$125	\$125	\$0	\$0	\$0	\$0			
7-8	Wastewater Pump Station Upgrade Program	\$2,600	\$1,200	\$1,400	\$0	\$0	\$0			
7-9	WWTP Biosolids Class "A"	\$4,015	\$0	\$0	\$0	\$415	\$3,600			
7-10	Headworks Concrete Structure	\$1,560	\$0	\$0	\$172	\$1,388	\$0			
7-11	Enclosed Bays & Est. Compliance Feasibility Study	\$4,520	\$2,150	\$400	\$400	\$400	\$1,170			
7-12	WWTP Motor Control Center Replacement Project	\$1,134	\$0	\$52	\$1,082	\$0	\$0			
7-13	WWTP Outfall Maintenance	\$572	\$0	\$50	\$522	\$0	\$0			
7-14	Bio Solids Dewatering	\$1,606	\$0	\$180	\$1,426	\$0	\$0			
7-15	Secondary Clarifier Maintenance Phase II	\$1,131	\$0	\$80	\$1,051	\$0	\$0			
	TOTAL	\$29,960	\$5,075	\$4,772	\$7,621	\$4,997	\$7,495			

## **Capital Improvement Program 2021/22**

## **WASTEWATER**

# PROJECT PRIORITIZATION

Projects	Importance	Redundancy	Remaining Useful Life	Final Score	Comments
Wastewater Collection System Maintenance	4	4	4	12	Requirement of CDO
Wastewater Lift Station Upgrade Program	3	4	4	11	Varies
Cross Town Interceptor Maintenance Phase II	3	4	1	8	Commissioned in 1984
Wastewater Pump Station Upgrade Program	3	4	4	11	Commissioned in 1983
WWTP Biosolids Class "A"	3	3	3	9	
Headworks Concrete Structure	3	4	3	10	
Enclosed Bays & Est. Compliance Feasibility Study	4	3	2	9	
WWTP Motor Control Center Replacement Project	3	4	3	10	
WWTP Outfall Maintenance	3	3	2	8	
Bio Solids Dewatering	4	3	1	8	
Secondary Clarifier Maintenance Phase II	2	2	1	5	

## Scoring Criteria

Importance	Score	Redundancy	Score	Remaining Useful Life	Score
Existing threat to public health or safety	4	System cannot function without asset	4	< 2 years	4
Mandated regulatory requirement	4	System can have limited function without asset	3	< 5 years	3
Potential public health or safety concern	3	System requires asset for emergency operations	2	Asset operating below optimal	3
Increase reliability or capacity	3	System can function without asset	1	5-20 years	2
Improve system operations and/or maintenance	2			> 20 years	1
It would be nice to do	1				

## WASTEWATER COLLECTION SYSTEM MAINTENANCE

Project Manager: Gabe Adame

#### **PROJECT DESCRIPTION**

A multi-phased, multi-year program to replace or rehabilitate deteriorated infrastructure as well as reduce rainfall derived inflow and infiltration (RDII) into the City's wastewater collection system.

#### **PROJECT LOCATION**

Various locations throughout the City

#### **JUSTIFICATION**

To reduce maintenance requirements, potential

for sanitary sewer overflows and/or structural failure, and to reduce I/I in conformance with the City's NPDES permit requirements issued by the California Regional Water Quality Control Board (RWQCB).



#### **CITY COUNCIL PRIORITY AND GOALS**

Meets Strategic Plan 2020 goals of supporting a financially sound city providing effective services and is listed as a High Priority Project in the Strategic Plan.

#### **STUDIES AND REPORTS**

1980 Infiltration/Inflow Study (Oscar Larson and Assoc.)

2008 Wastewater Facilities Plan Phase 1 (Brown and Caldwell)

2016 Sanitary Sewer Evaluation Survey and Wet Weather Improvement Plan (SHN)

Operational inspections and/or reports of problems

#### **PRIOR APPROPRIATIONS**

FY 16/17 - Old Town Sewer Reconstruction Project (\$1,120,000)

FY 17/18 - 3rd and Y Basin Pipe Lining (\$1,500,000)

FY20/21 – Various Locations (\$1,900,000)

#### **FISCAL IMPACT**

Budget an average of \$3M (2020 dollars) plus 4% for inflation per year

2021 – Sewer Maintenance 2021 (\$1,768,000)

2022 – Sewer Maintenance 2022 (\$2,080,000)

2023 – Sewer Maintenance 2023 (\$3,200,000)

2024 - Sewer Maintenance 2024 (\$3,320,000)

		(Thou				
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	
<b>Expenditure Category</b>	21/22	22/23	23/24	24/25	25/26	Five Year
Right-of-way						\$0
Design						\$0
Professional Services						\$0
Construction	\$1,600	\$2,000	\$2,500	\$2,500	\$2,500	\$11,100
EXPENDITURE TOTALS	\$1,600	\$2,000	\$2,500	\$2,500	\$2,500	\$11,100
Wastewater Fund	\$1,552	\$1,940	\$2,425	\$2,425	\$2,425	\$10,767
HCSD Group Fund	\$48	\$60	\$75	\$75	\$75	\$333

## WASTEWATER LIFT STATION UPGRADE PROGRAM

Project Manager: Gabe Adame

#### **PROJECT DESCRIPTION**

Repair, upgrade, replace or remove wastewater lift stations and/or components, including the addition of generators, as they age and become outdated and ineffective.

#### **PROJECT LOCATION**

Citywide

#### **JUSTIFICATION**

To maintain integrity of the City's wastewater conveyance facilities.

#### **CITY COUNCIL PRIORITY AND GOALS**

Meets Strategic Plan 2020 goal of supporting a financially sound city providing effective services.

#### STUDIES AND REPORTS

Not Available

#### **PRIOR APPROPRIATIONS**

FY 14/15 - Hilfiker LS Upgrade (\$415,000)

FY 16/17 - 3rd & Y Backup Generator (\$35,000)

FY 17/18 – Waterfront LS Reconstruction (\$310,000)

FY 19/20 - Del North (\$678,000)

#### **FISCAL IMPACT**

Program costs vary by type and scope of work (2020 dollars) plus 4% for inflation annually.

		(Thou				
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	
<b>Expenditure Category</b>	21/22	22/23	23/24	24/25	25/26	Five Year
Right-of-way		\$10				\$10
Design			\$52	\$24		\$76
Professional Services						\$0
Construction		\$600	\$416	\$270	\$225	\$1,511
EXPENDITURE TOTALS	<b>\$0</b>	\$610	\$468	\$294	\$225	\$1,597
Wastewater Fund Group		\$592	\$454	\$285	\$218	\$1,549
HCSD Fund Group		\$18	\$14	\$9	\$7	\$48



## CROSS TOWN INTERCEPTOR MAINTENANCE PHASE II

Project Manager: Gabe Adame

#### **PROJECT DESCRIPTION**

Replacement of air release valves and associated components.

#### **PROJECT LOCATION**

Various locations throughout the City

#### **JUSTIFICATION**

Maintain structural integrity of City's wastewater transmission main, the Cross-Town Interceptor.

#### **CITY COUNCIL PRIORITY AND GOALS**

Meets Strategic Plan 2020 goal of supporting a financially sound city providing effective services.

#### **STUDIES AND REPORTS**

Survey reports by Corrpro Companies, Inc.

2012 Condition Assessment by GHD

2012 Preliminary Risk Assessment by GHD

2016 Cathodic Protection and Stray Current Assessment



Past cathodic protection survey reports contain the following recommendations:

- 1. Restore electrical continuity on the pipeline between Del Norte and Truesdale Streets
- 2. Re-establish baseline survey data
- 3. Replace deep-well anode bed on Railroad Avenue, north of Del Norte Street.
- 4. Perform regular cathodic protection survey.

#### **PRIOR APPROPRIATIONS**

FY 16/17 - Project #433 (\$80,400)

FY 19/20 – XTI Cathodic Protection (\$362,000)

#### **FISCAL IMPACT**

Total estimated construction cost: \$125,000 (2020 dollars) plus 4% for inflation annually.

		(Thou				
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	
<b>Expenditure Category</b>	21/22	22/23	23/24	24/25	25/26	Five Year
Right-of-way						\$0
Design						\$0
Professional Services						\$0
Construction	\$125					\$125
EXPENDITURE TOTALS	\$125	\$0	\$0	\$0	\$0	\$125
Wastewater Fund Group	\$85					\$85
HCSD Fund Group	\$40					\$40
FUNDING TOTALS	\$125	\$0	\$0	\$0	\$0	\$125



## WASTEWATER PUMP STATION UPGRADE PROGRAM

Project Manager: Gabe Adame

#### **PROJECT DESCRIPTION**

Replace original pumps with submersible variable frequency drive (VFD) pumps and upgrade other critical support components as necessary.

#### **PROJECT LOCATION**

Hill Street, Washington Street, and McCullens Avenue Pump Stations

#### **JUSTIFICATION**

During current periods of wet weather, three of the the City's four pump stations pump, at full capacity, pump all of their flows to the Elk River Wastewater Treatment Plant (WWTP). This amount of flows can overwhelm the WWTP. VFD pumps will allow the pump stations to throttle flows and better meter them to the WWTP while at the same time reducing energy consumption. Pumps at the facilities were installed in 1983 and are at the end of their useful lives.



#### **CITY COUNCIL PRIORITY AND GOALS**

Meets Strategic Plan 2020 goal of supporting a financially sound city providing effective services.

#### **STUDIES AND REPORTS**

Pump Station evaluation is currently being performed.

#### **PRIOR APPROPRIATIONS**

FY 19/20 - Hill Street Pump Installation (\$65,000)

#### **FISCAL IMPACT**

The estimated cost is \$2,000,000 (2020 dollars) plus 4% inflation annually.

		(Thou				
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	
<b>Expenditure Category</b>	21/22	22/23	23/24	24/25	25/26	Five Year
Right-of-way						\$0
Design				_		\$0
Professional Services						\$0
Construction	\$1,200	\$1,400				\$2,600
EXPENDITURE TOTALS	\$1,200	\$1,400	\$0	\$0	\$0	\$2,600
Wastewater Fund Group	\$816	\$952				\$1,768
HCSD Fund Group	\$384	\$448				\$832
FUNDING TOTALS	\$1,200	\$1,400	\$0	\$0	\$0	\$2,600

## WWTP BIOSOLIDS CLASS "A"

Project Manager: Kelly Allen

#### **PROJECT DESCRIPTION**

Upgrade the biosolids dewatering process to meet Class A requirements.

#### **PROJECT LOCATION**

Elk River Waste Water Treatment Plant

#### **JUSTIFICATION**

Decrease volume and disposal restrictions for biosolids produced at the WWTP and stored in facultative sludge lagoons, providing reduced O&M costs and a useable product to the community.

#### **CITY COUNCIL PRIORITY AND GOALS**

Meets Strategic Plan 2020 goal of supporting a financially sound city providing effective services.



#### **STUDIES AND REPORTS**

2015 Investigation of Dredging and Loading Equipment, along with Biosolids Disposal Options including Land Application and Drying/Composting: COE Biosolids Disposal;

#### **PRIOR APPROPRIATIONS**

FY 06/07 - Design and construction of a centrifuge and associated facilities to dewater biosolids (\$889,000)

FY 18/19 - Feasibility study by Brown & Caldwell (which includes Co-generation analysis) (\$83,000)

#### **FISCAL IMPACT**

Total estimated cost: \$3,403,000 (2020 dollars) plus 4% for inflation annually.

		(Thou				
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	
<b>Expenditure Category</b>	21/22	22/23	23/24	24/25	25/26	Five Year
Right-of-way						\$0
Design				\$415		\$415
Professional Services						\$0
Construction			5		\$3,600	\$3,600
EXPENDITURE TOTALS	\$0	\$0	\$0	\$415	\$3,600	\$4,015
Wastewater Fund Group				\$282	\$2,448	\$2,730
HCSD Fund Group				\$133	\$1,152	\$1,285
FUNDING TOTALS	\$0	\$0	\$0	\$415	\$3,600	\$4,015

## **HEADWORKS CONCRETE STRUCTURE**

Project Manager: David Caisse

#### **PROJECT DESCRIPTION**

Assess and repair areas of failed concrete at WWTP. Repair damaged gates and slides.

#### **PROJECT LOCATION**

Elk River Waste Water Treatment Plant

#### **JUSTIFICATION**

The headworks has experienced significant degradation in the concrete structures due to the corrosive nature of the wastewater that continuously passes through. In many locations the concrete degradation has reached depths approaching steel reinforcement that could cause accelerated damage to the structure. The gates that control flow from the headworks are also in need of replacement and will be replaced during headworks repair.



#### **CITY COUNCIL PRIORITY AND GOALS**

Meets Strategic Plan 2020 goal of supporting a financially sound city providing effective services.

#### **STUDIES AND REPORTS**

2019 Elk River Wastewater Treatment Plant Headworks Structural Condition Assessment

#### **PRIOR APPROPRIATIONS**

Assessment & Report (Brown and Caldwell) and Bypass Services (Munson Pump Services) (\$70,000)

#### **FISCAL IMPACT**

Estimated cost for construction is \$1,508,000 (2020 dollars) plus 4% inflation annually.

		(Thou				
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	
<b>Expenditure Category</b>	21/22	22/23	23/24	24/25	25/26	Five Year
Right-of-way						\$0
Design						\$0
Professional Services			\$172			\$172
Construction				\$1,388		\$1,388
EXPENDITURE TOTALS	\$0	\$0	\$172	\$1,388	\$0	\$1,560
Wastewater Fund Group			\$117	\$944		\$1,061
HCSD Fund Group			\$55	\$444		\$499
FUNDING TOTALS	\$0	\$0	\$172	\$1,388	\$0	\$1,560

## **ENCLOSED BAYS & ESTUARIES COMPLIANCE FEASIBILITY STUDY**

Project Manager: Jesse Willor

#### **PROJECT DESCRIPTION**

The City is required to have a comprehensive plan to address compliance with the Enclosed Bays and Estuaries Policy (EBEP). This project will prepare a feasibility study and assessments that will identify preferred alternatives for wastewater treatment and discharge. From the study, permitting, design and construction will follow.

#### **PROJECT LOCATION**

Elk River Waste Water Treatment Plant

#### **JUSTIFICATION**

The North Coast Regional Water Quality Control Board has found that the City's Elk River WWTP discharge must meet the EBEP requirements in order for the National Pollutant Discharge Elimination System Permit to remain valid. The Board also issued a Cease and Desist Order in order for the City to have time to meet this regulatory requirement. The feasibility study is the first step towards meeting these requirements.



#### CITY COUNCIL PRIORITY AND GOALS

Meets Strategic Plan 2020 goal of supporting a financially sound city providing effective services.

#### **STUDIES AND REPORTS**

Wet Weather Improvement Plan, Outfall Inspection Report, Sewer System Evaluation Survey Enclosed Bays and Estuaries Compliance Feasibility Study (currently underway)

#### **COMMENTS**

None

### **PRIOR APPROPRIATIONS**

Enclosed Bays and Estuaries Compliance Feasibility Study Phase I (\$219,000) Enclosed Bays and Estuaries Compliance Feasibility Study Phase II (\$397,000) Enclosed Bays and Estuaries Compliance Feasibility Study Phase III (\$220,000)

#### **FISCAL IMPACT**

Costs estimated to be \$2,370,000 (2020 dollars) plus 4% for inflation annually.

		(Thou				
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	
<b>Expenditure Category</b>	21/22	22/23	23/24	24/25	25/26	Five Year
Right-of-way						\$0
Design		\$200	\$200	\$200	\$1,170	\$1,770
Professional Services	\$400	\$200	\$200	\$200		\$1,000
Construction	\$1,750					\$1,750
EXPENDITURE TOTALS	\$2,150	\$400	\$400	\$400	\$1,170	\$4,520
Wastewater Fund Group	\$1,462	\$272	\$272	\$272	\$796	\$3,074
HCSD Fund Group	\$688	\$128	\$128	\$128	\$374	\$1,446
FUNDING TOTALS	\$2,150	\$400	\$400	\$400	\$1,170	\$4,520

## WWTP MOTOR CONTROL CENTER (MCC) REPLACEMENT PROJECT

Project Manager: Gabe Adame

#### **PROJECT DESCRIPTION**

Replace existing motor control centers with modern and energyefficient units.

#### **PROJECT LOCATION**

Elk River Waste Water Treatment Plant

#### **JUSTIFICATION**

The existing motor control centers (MCCs) are over 30 years old and nearing the end of their useful service life. Spare parts are becoming extremely scarce and available parts are excessively expensive.

#### CITY COUNCIL PRIORITY AND GOALS

Meets Strategic Plan 2020 goal of supporting a financially sound city providing effective services.

#### **STUDIES AND REPORTS**

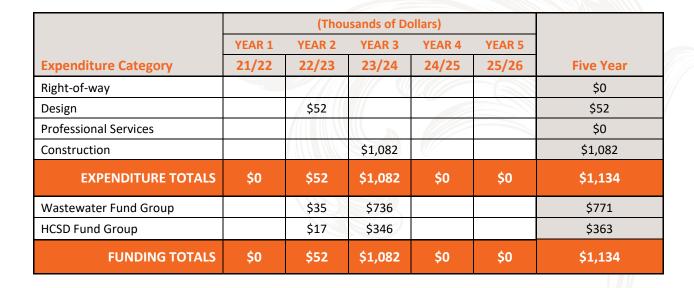
MCC evaluation has been performed by Sierra Controls, Inc. to determine replacement necessity

#### **PRIOR APPROPRIATIONS**

MCC evaluations performed by Sierra Controls, Inc. (\$15,000)

#### **FISCAL IMPACT**

Costs estimated to be \$1,000,000 for construction and installation (2020 dollars) plus 4% for inflation annually





# ELK RIVER WASTEWATER TREATMENT PLANT (ERWWTP) OUTFALL MAINTENANCE

Project Manager: David Caisse

#### **PROJECT DESCRIPTION**

Maintenance of outfall pipe and associated scour protection including; diffuser flap gate replacement, failed hardware replacement, cleaning and scour protection maintenance.

#### **PROJECT LOCATION**

**Humboldt Bay** 

#### **JUSTIFICATION**

Evaluation and Inspection of the outfall took place in November 2017 and the ensuing report determined necessary maintenance., repairs, &/or improvements for continued long-term operation of the outfall. This project addresses recommendations from the inspection report.

#### **CITY COUNCIL PRIORITY AND GOALS**

Meets Strategic Plan 2020 goal of supporting a financially sound city providing effective services.

#### **STUDIES AND REPORTS**

Elk River Wastewater Treatment Plant Outfall Inspection Report (November 2017)

#### **COMMENTS**

Not Available

#### **PRIOR APPROPRIATIONS**

Elk River Wastewater Treatment Plant Outfall Inspection Report - \$98,000

#### **FISCAL IMPACT**

Costs estimated to be \$572,000 for construction maintenance (2020 dollars).

		(Thou				
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	
<b>Expenditure Category</b>	21/22	22/23	23/24	24/25	25/26	Five Year
Right-of-way						\$0
Design/Evaluation						\$0
Professional Services						\$0
Construction		\$50	\$522			\$572
EXPENDITURE TOTALS	\$0	\$50	\$522	\$0	\$0	\$572
Wastewater Fund Group		\$34	\$355			\$389
HCSD Fund Group		\$16	\$167			\$183
FUNDING TOTALS	\$0	\$50	\$522	\$0	\$0	\$572



## **BIOSOLIDS DEWATERING 2020**

Project Manager: Kelly Allen

#### **PROJECT DESCRIPTION**

Install a second dewatering device for the biosolids produced at the WWTP

#### **PROJECT LOCATION**

Elk River Waste Water Treatment Plant

#### **JUSTIFICATION**

The two facultative sludge lagoons are full and must have continual dewatering of biosolids to maintain capacity. A second dewatering device will allow for redundancy and larger capacity at a critical stage of the wastewater treatment process.

#### **CITY COUNCIL PRIORITY AND GOALS**

Meets Strategic Plan 2020 goal of supporting a financially sound city providing effective services.

#### **STUDIES AND REPORTS**

None

#### **COMMENTS**

None

#### **PRIOR APPROPRIATIONS**

None

#### **FISCAL IMPACT**

Total project cost - \$1,370,000 (2020 dollars) plus 4% for inflation annually.



		(Thou				
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	
<b>Expenditure Category</b>	21/22	22/23	23/24	24/25	25/26	Five Year
Right-of-way						\$0
Design/Evaluation		\$90				\$90
Professional Services		\$90				\$90
Construction			\$1,426			\$1,426
EXPENDITURE TOTALS	\$0	\$180	\$1,426	\$0	\$0	\$1,606
Wastewater Fund Group		\$122	\$969			\$1,091
HCSD Fund Group		\$58	\$457			\$515
FUNDING TOTALS	\$0	\$180	\$1,426	\$0	\$0	\$1,606

## SECONDARY CLARIFIER MAINTENANCE PHASE II

Project Manager: Kelly Allen

#### **PROJECT DESCRIPTION**

Remove and replace the launders, launders support arms and scum baffle that attaches to the inside of the launders.

#### **PROJECT LOCATION**

Elk River Waste Water Treatment Plant

#### **JUSTIFICATION**

While in construction of replacing the drive and bridge we found that the launders support arms are deteriorating from the inside out.

#### **CITY COUNCIL PRIORITY AND GOALS**

Meets Strategic Plan 2020 goal of supporting a financially sound city providing effective services.

#### **STUDIES AND REPORTS**

**GHD Technical Memo** 

#### **COMMENTS**

None

#### **PRIOR APPROPRIATIONS**

None

#### **FISCAL IMPACT**

Total project cost - \$1,095,000.00 (2020 dollars) plus 4% for inflation annually.



	(Thousands of Dollars)					
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	
<b>Expenditure Category</b>	21/22	22/23	23/24	24/25	25/26	Five Year
Right-of-way						\$0
Design/Evaluation	///////	\$80				\$80
Professional Services			\$70			\$70
Construction			\$981			\$981
EXPENDITURE TOTALS	\$0	\$80	\$1,051	\$0	\$0	\$1,131
Wastewater Fund		\$54	\$715			\$769
HCSD		\$26	\$336			\$362
FUNDING TOTALS	\$0	\$80	\$1,051	\$0	\$0	\$1,131